Agriculture and Rural Communities Energy Roadmap—Stakeholder Meeting

Wednesday, July 31, 2019

Michigan Public Service Commission

Lansing Conference Room

7109 W. Saginaw Hwy.

Lansing, MI 48917

PSC EGLE

Welcome and Introductions

Overview of Agenda and Meeting Process

Agenda

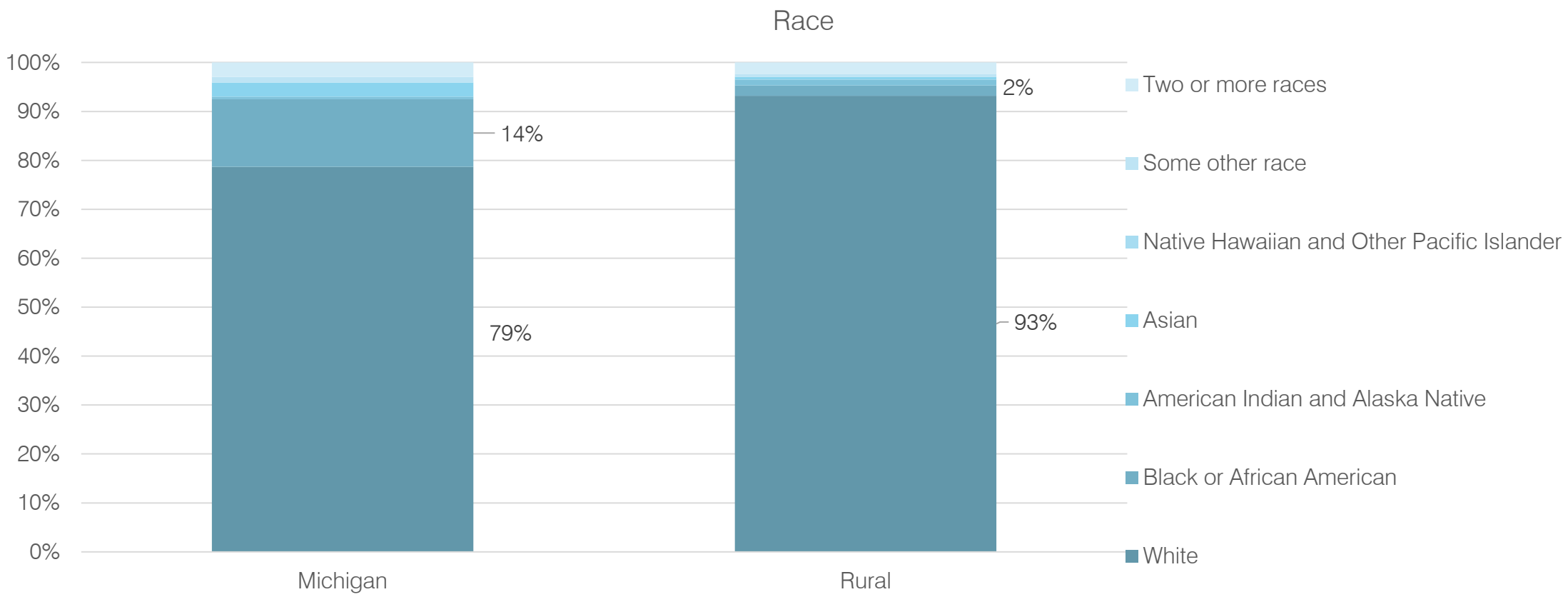
Time	Agenda Item	Presenter
8:45–9:00 AM	Meet and Greet	
9:00–9:10 AM	Welcome and Introductions	Robert Jackson; Department of Environment, Great Lakes, and Energy (EGLE)
9:10–9:15 AM	Overview of Agenda and Meeting Process	Julie Metty Bennett Public Sector Consultants (PSC)
9:15–10:00 AM	Presentation of Findings from the Agriculture and Rural Communities Energy Roadmap—Baseline and Evaluation Assessment	Jill Steiner and Eric Pardini; PSC
10:00–10:15 AM	Discussion of Research Findings	Julie Metty Bennett; PSC
10:15–10:30 AM	Break	
10:30–11:30 AM	Identify New or Changed Policies and Programs	Julie Metty Bennett; PSC
11:30–11:45 AM	Review Recommendations	Julie Metty Bennett; PSC
11:45 AM–12:00 PM	Thank You/Next Steps	Terri Novak; EGLE

Presentation of Findings from the Agriculture and Rural Communities Energy Roadmap—Baseline and Evaluation Assessment

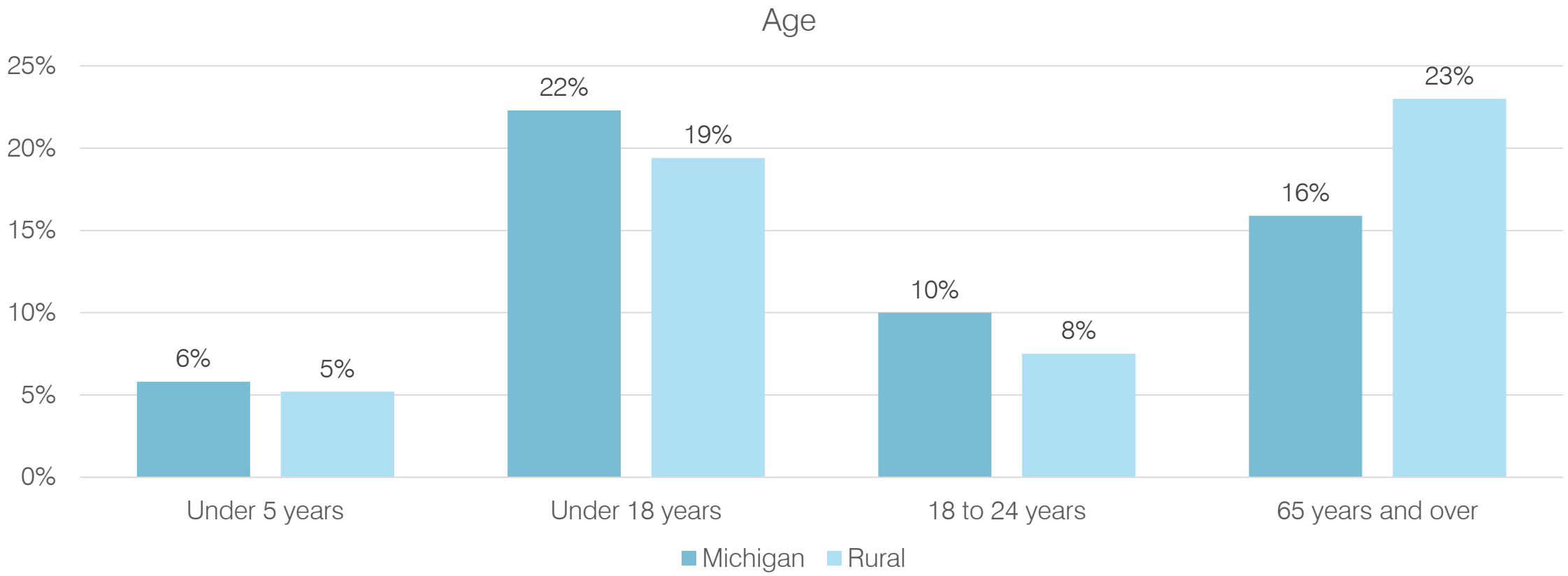
Overview of Rural Population—Definition

- Federal agencies have over two dozen definitions for rural communities based on land use, population density, and economic characteristics
- Definition, including list of rural counties and zip codes, comes from Federal Office of Rural Health Policy

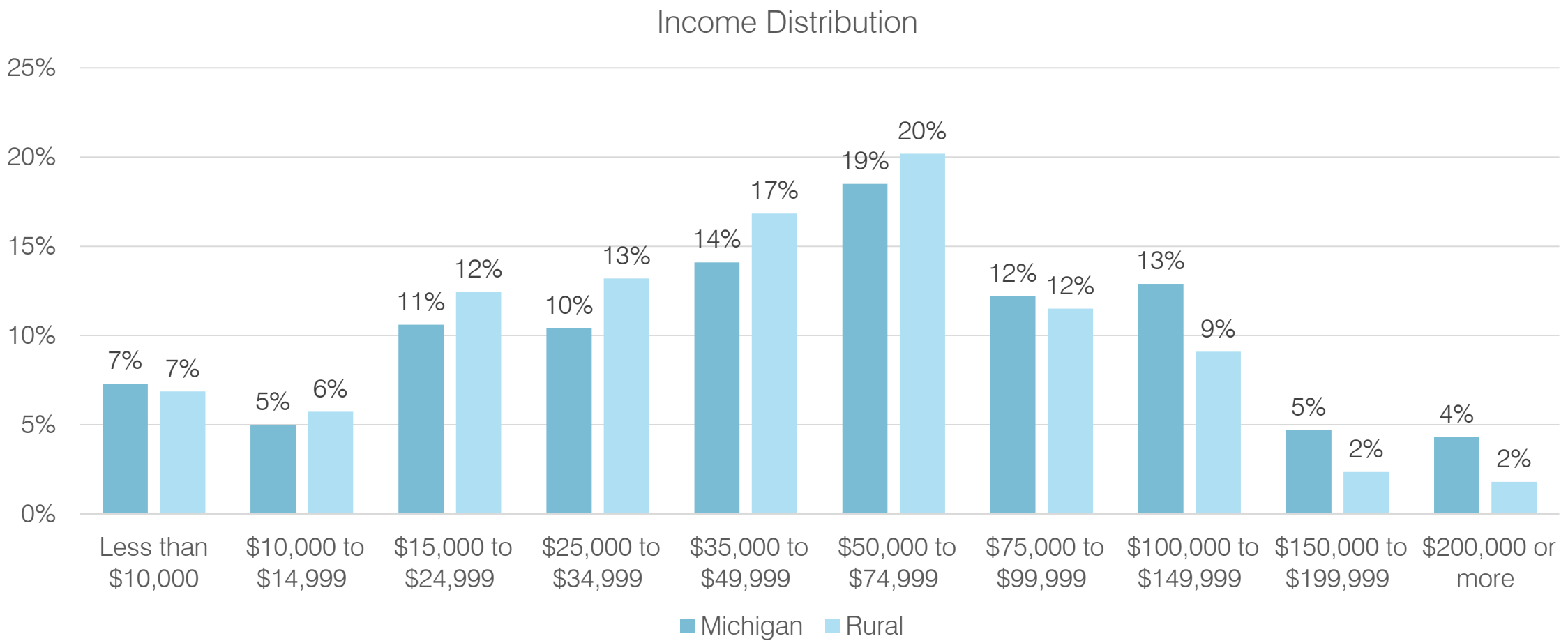
Rural Demographics—Population



Rural Demographics—Population



Rural Demographics—Income and Employment



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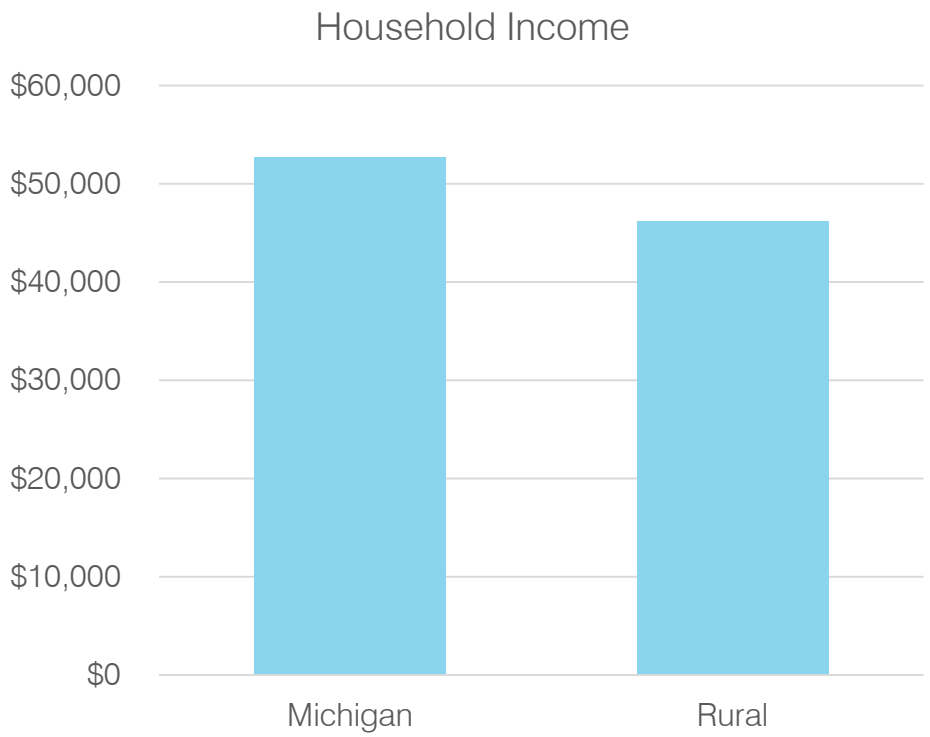

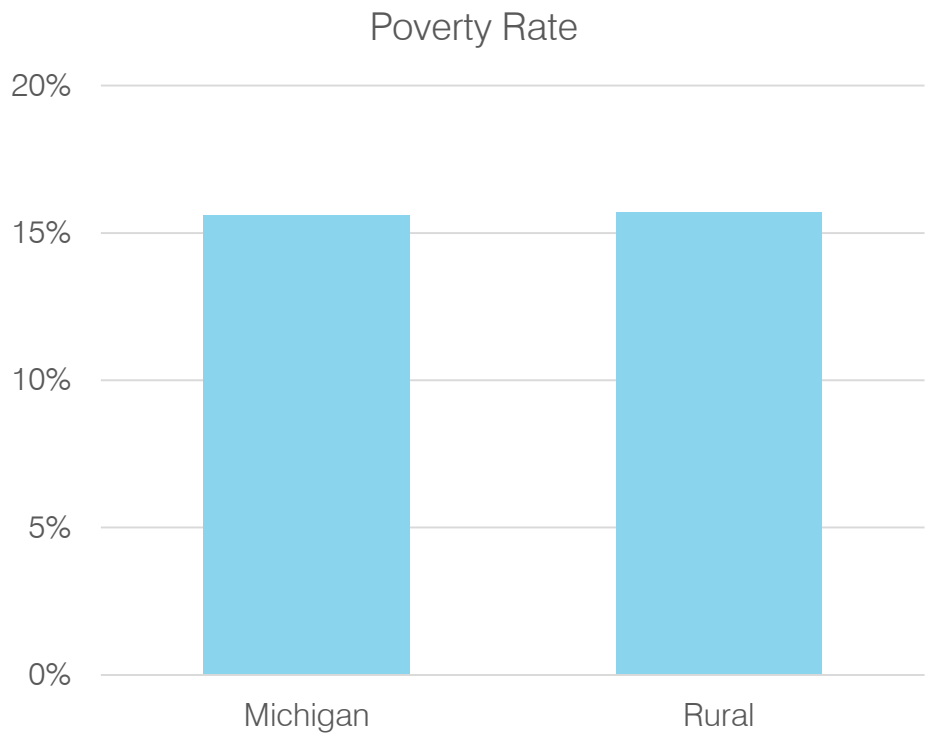

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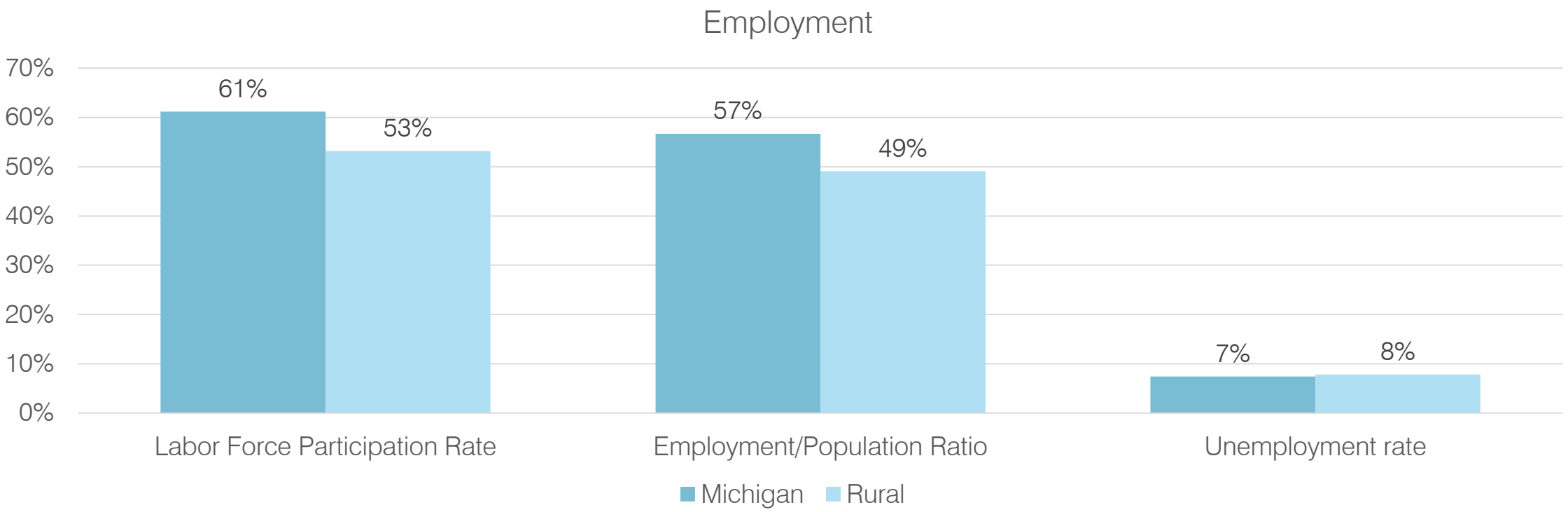
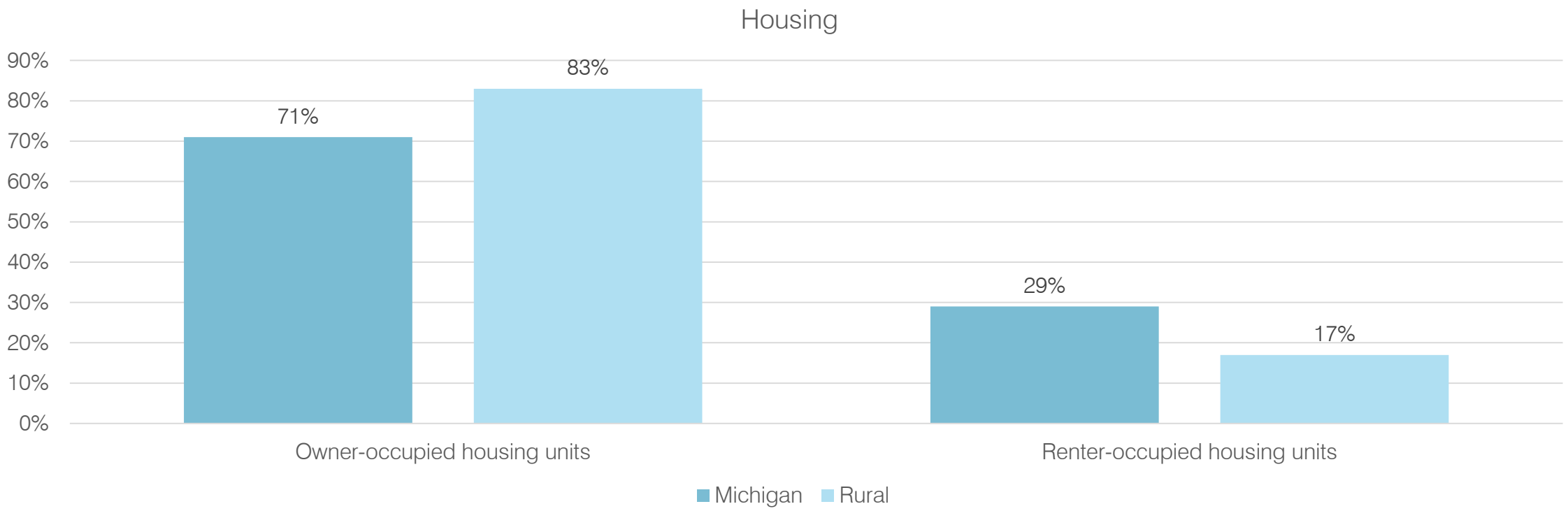
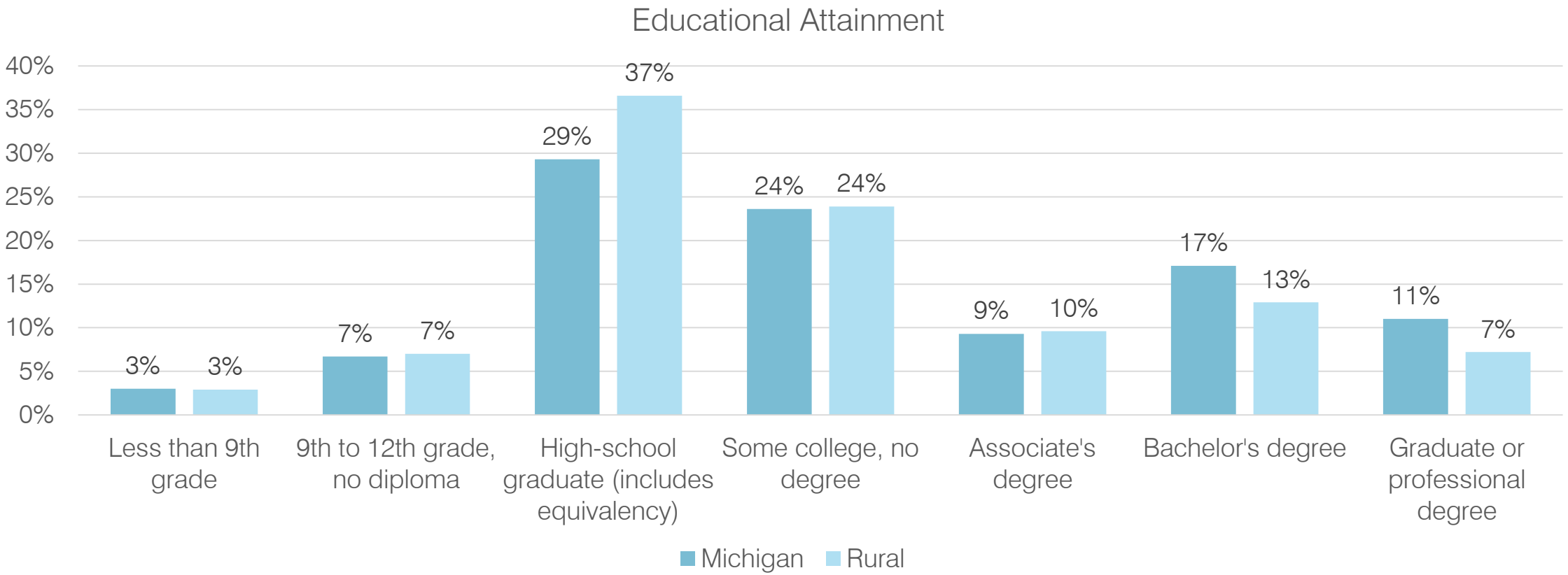


Rural Demographics—Housing



Rural Demographics—Educational Attainment

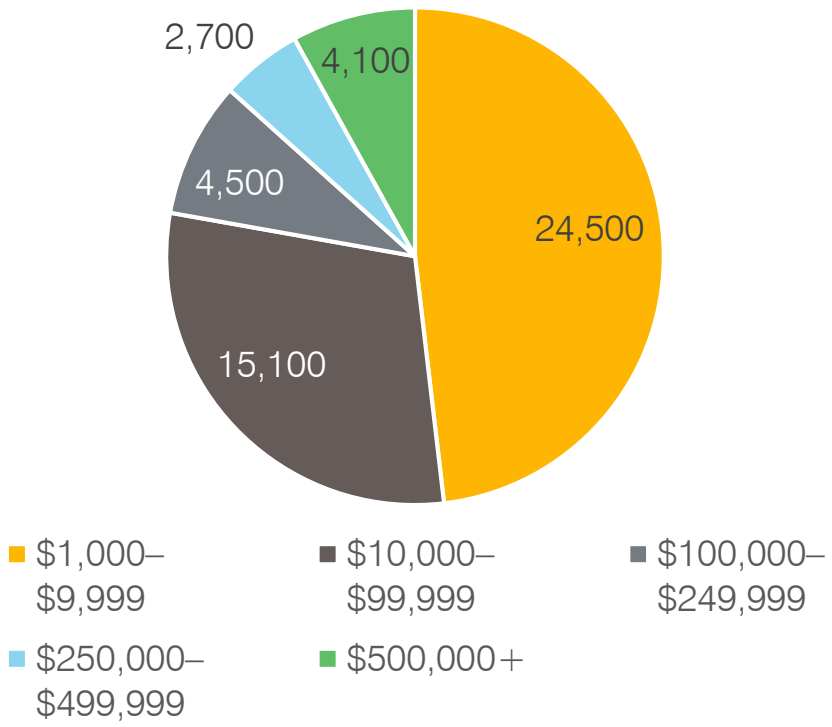


Overview of Agriculture Sector

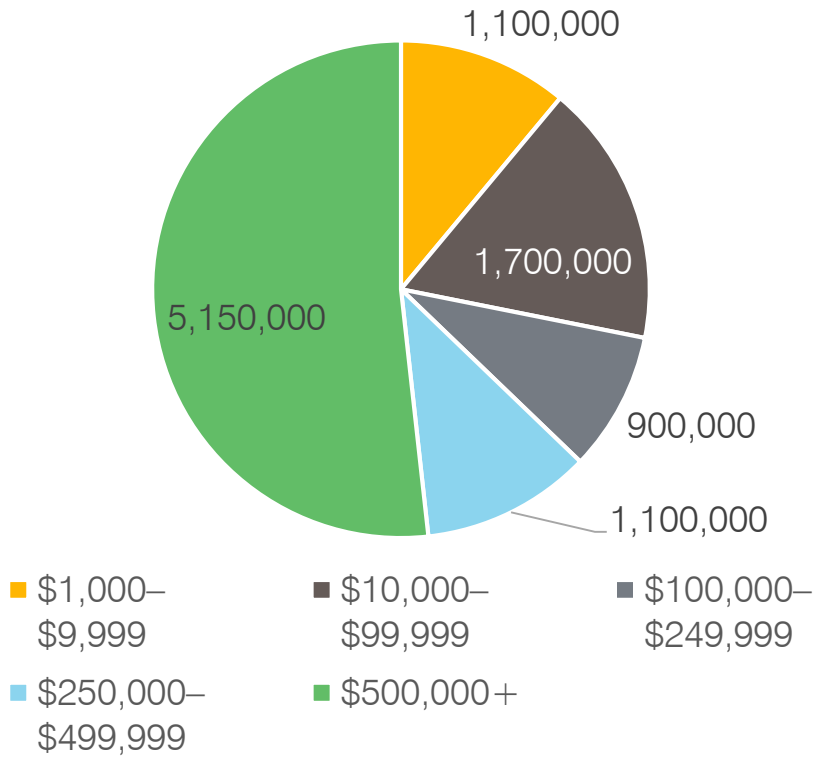
- Michigan has over 50,000 farm operations producing 300 different commodities
- Michigan is the second-most agriculturally diverse state in the U.S.
- Total value of production from Michigan's agriculture sector is $8.1 billion
- The combined food and agriculture sectors contribute $104.7 billion annually to the state's economy, representing 20 percent of the state's gross domestic product and 22 percent of total employment

Agriculture Sector—Farming

Number of Farms by Economic Sales Class,



Amount of Farmland by Economic Sales Class



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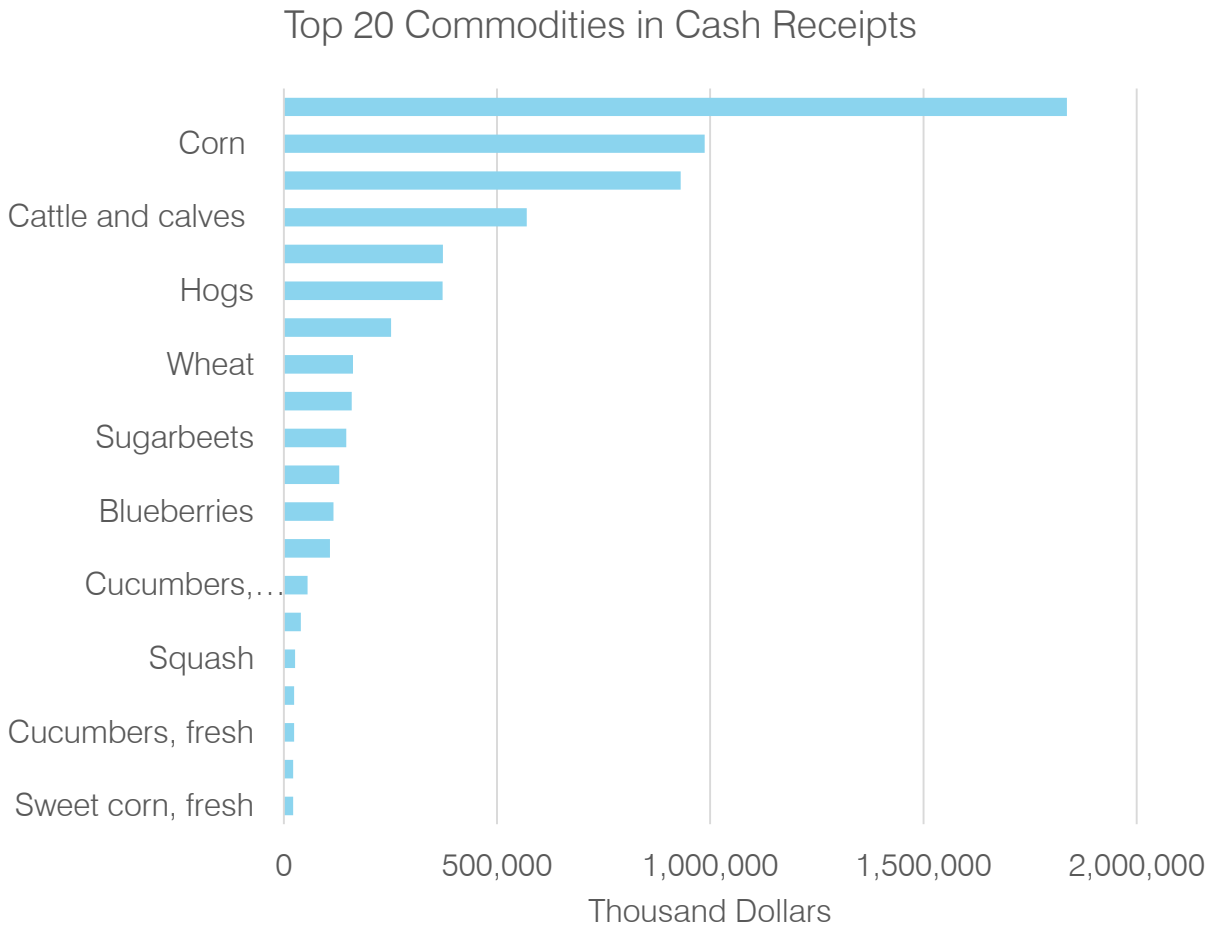
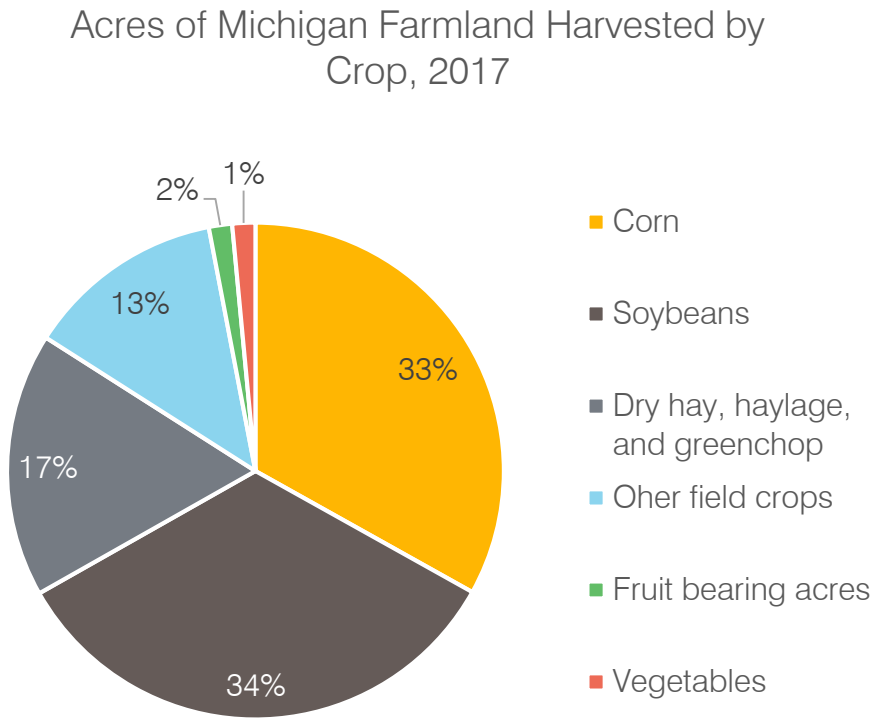




Agriculture Sector—Agribusiness

- Agribusiness is an essential part of Michigan's agriculture sector
- Michigan's food processing sector alone generated $25 billion in economic output
- Industry includes grain handlers, feed suppliers, seed companies, fertilizer companies, food processors, and agritourism

Energy Characteristics for Agriculture and Rural Customers

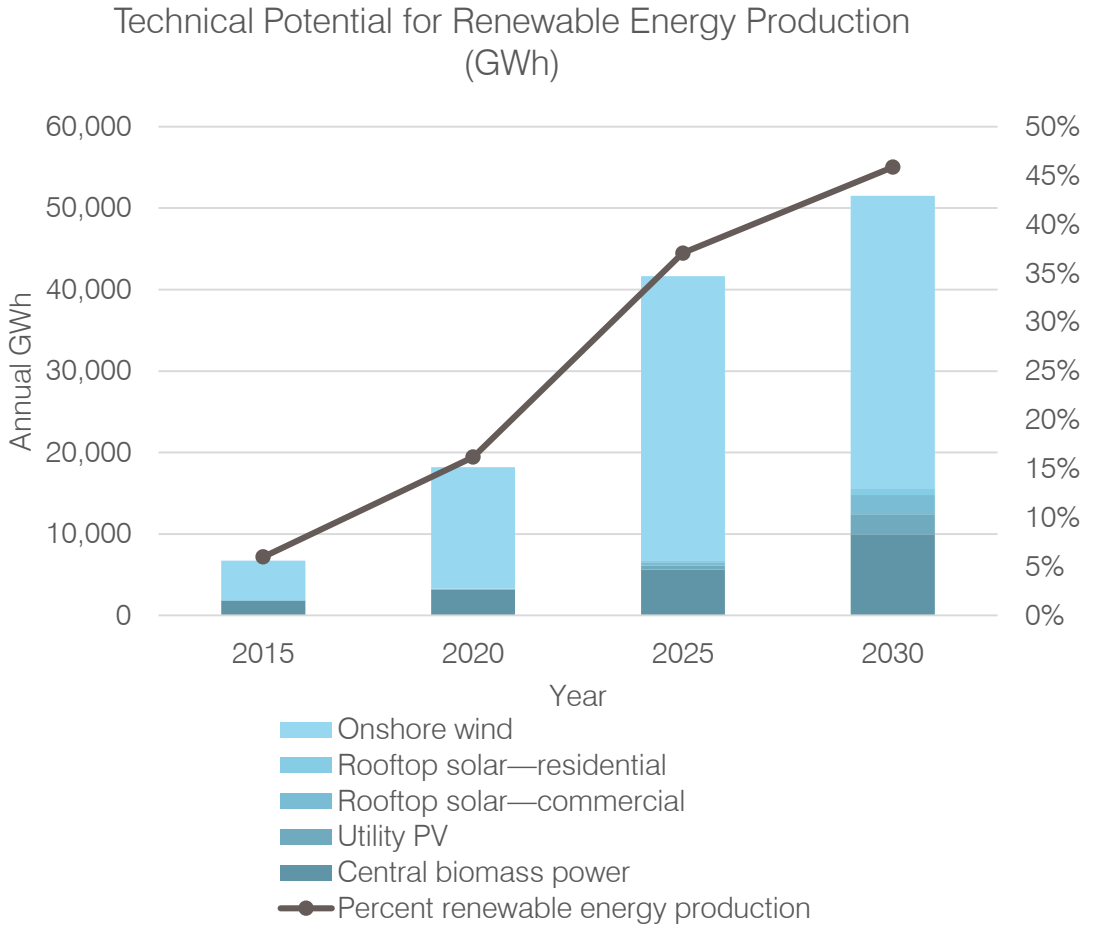
- Statewide, 75 percent of customers are served by natural gas utilities and 8 percent rely on propane providers
- In rural communities, just over 50 percent of customers have natural gas service and 23 percent are served by propane providers
- The use of wood and fuel oil are also more prevalent in rural communities
- Energy consumption can be a significant business expense for some commodity types and certain agricultural processes, ranging from 10 to 15 percent for livestock operations to 40 to 50 percent for wheat and other commodities
- Projections show that if fuel costs were to double for farmers, it could result in a 13 percent increase in commodity prices

Potential for Energy Efficiency

- Studies of the cost-effective energy-efficiency potential for the Upper and Lower Peninsulas have found that there is significant potential for savings
- Based on forecasted sales for the Upper Peninsula, the potential for energy efficiency is an additional **14.4 percent by 2026** and **20.4 percent by 2036**
- Based on forecasted sales for the Lower Peninsula, the potential for energy efficiency is an additional **16.9 percent by 2026** and **24.4 percent by 2036**

Potential for Renewable Energy

- Michigan's technical potential for renewable energy generation was estimated at 51,000 gigawatt hours (GWh) by 2030
- This translates to roughly 45.9 percent renewable energy production based on 2017 production levels



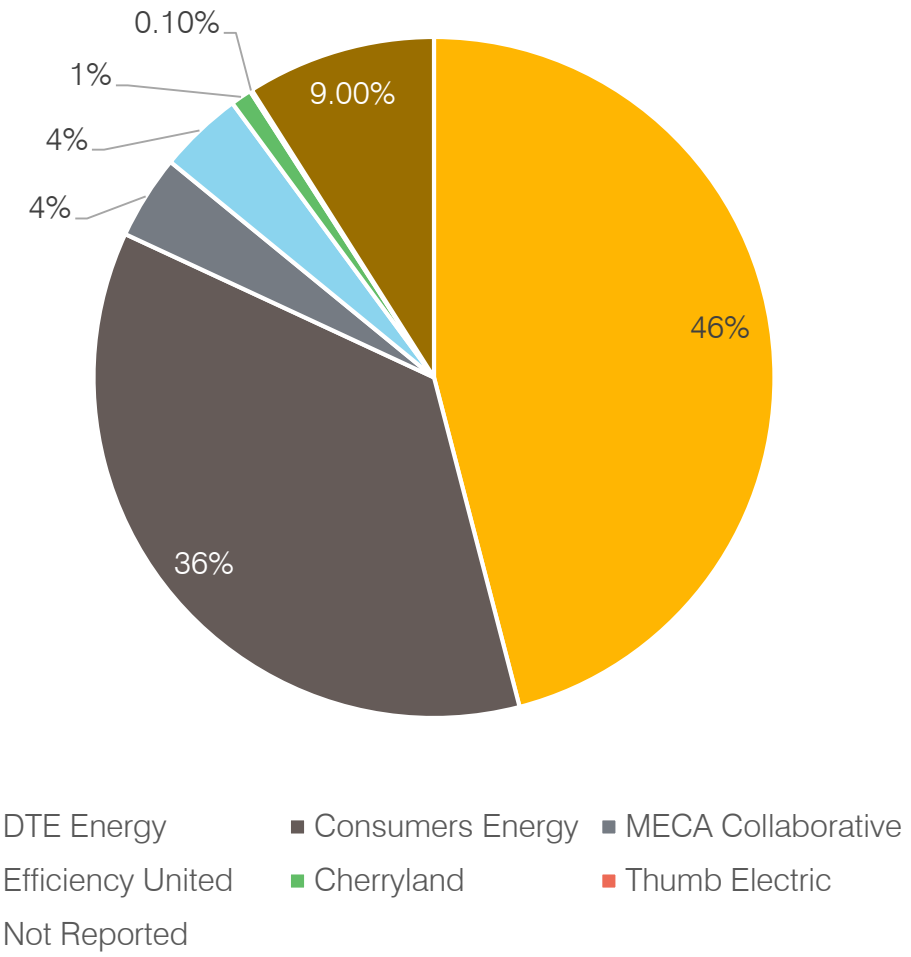
Evaluation of Energy-efficiency Program Offerings for Agriculture and Rural Communities

Evaluation Components

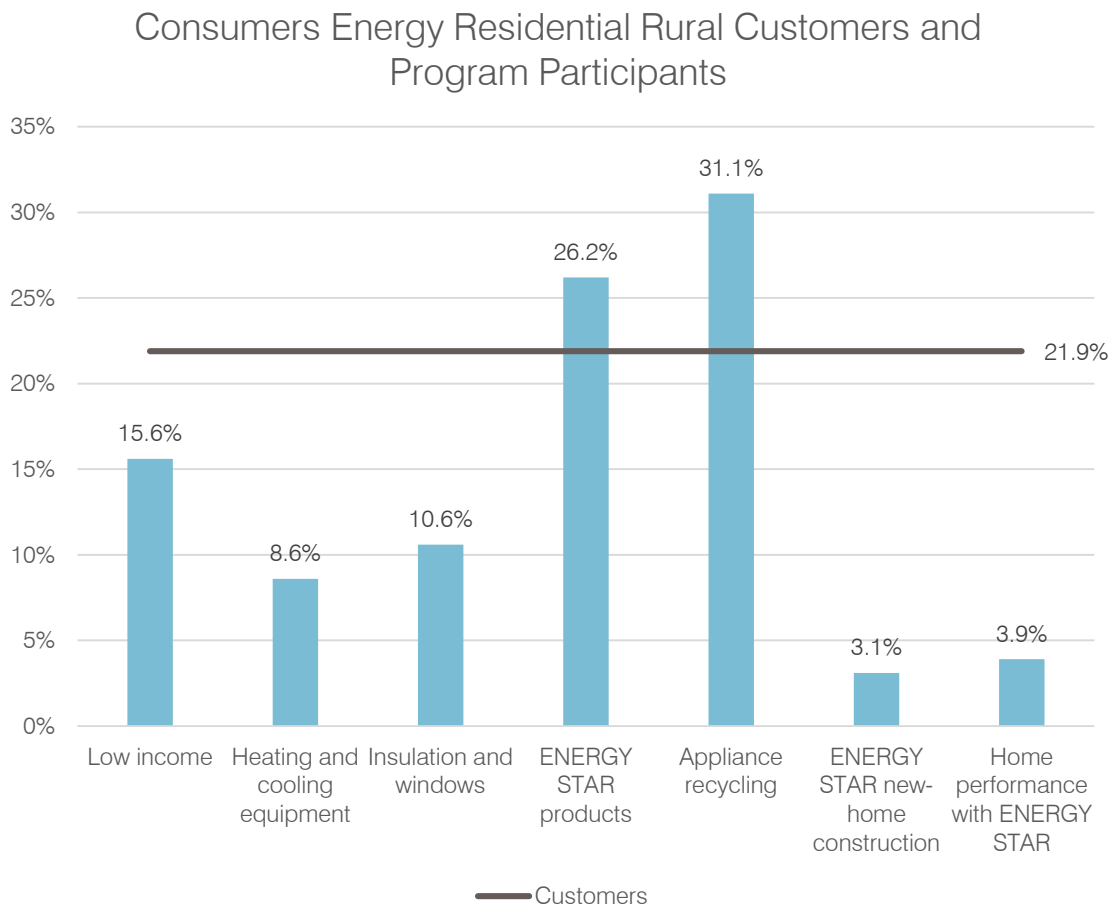
- Review of existing evaluations of programs targeted to agriculture or rural communities
- Interviews with 39 different stakeholders, including government agencies, nonprofits, commodity groups, state associations, energy providers, and other entities
- Analysis of utility data for program delivery
- Benchmarking and best practices review of programs nationally
- Survey of farms/agribusinesses, residents of rural communities, and local government and community leaders

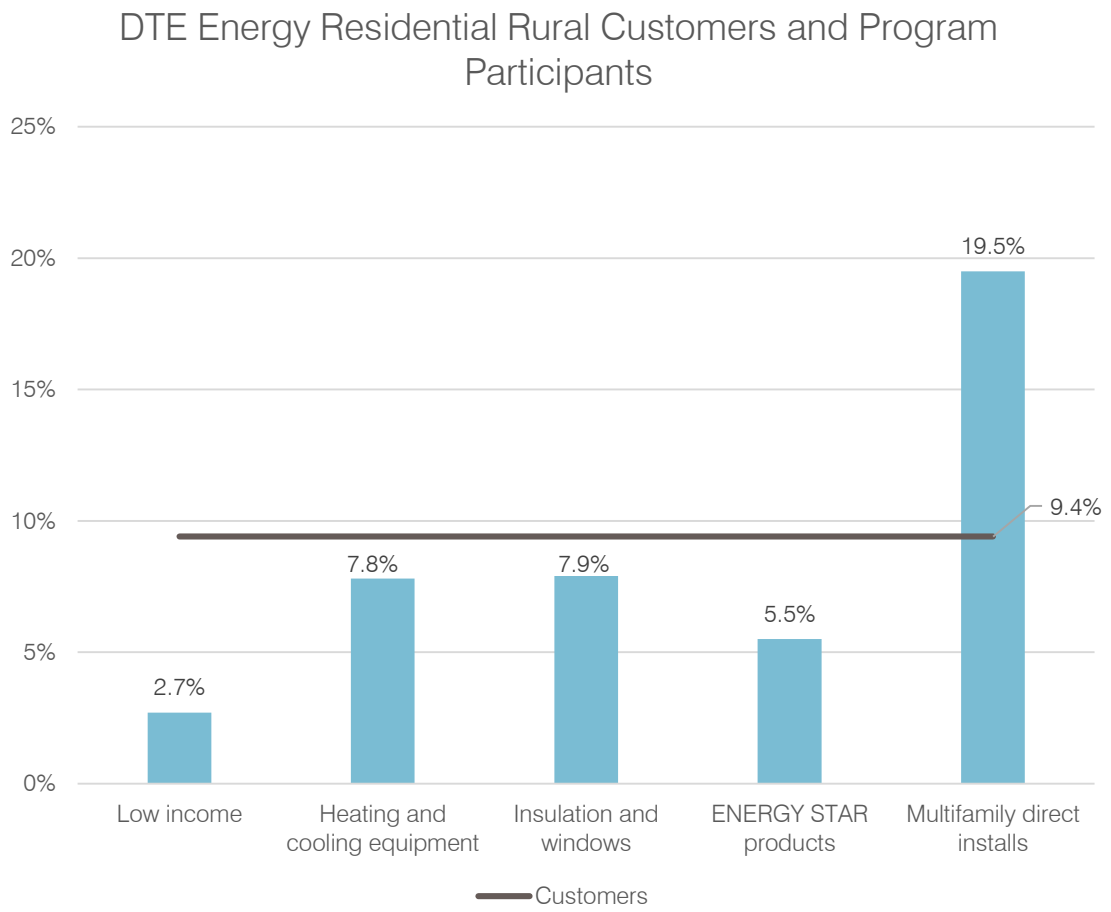
Analysis of Utility Data

- The project team gathered participation, incentive, and savings information for rural areas to compare proportion of program activity to the proportion of customers living in designated areas
- Reporting utilities and program administrators represent more than 90 percent of electric use in Michigan
- Cherryland Electric Cooperative, Thumb Electric Cooperative, Efficiency United, and the MECA Collaborative service areas are predominately rural

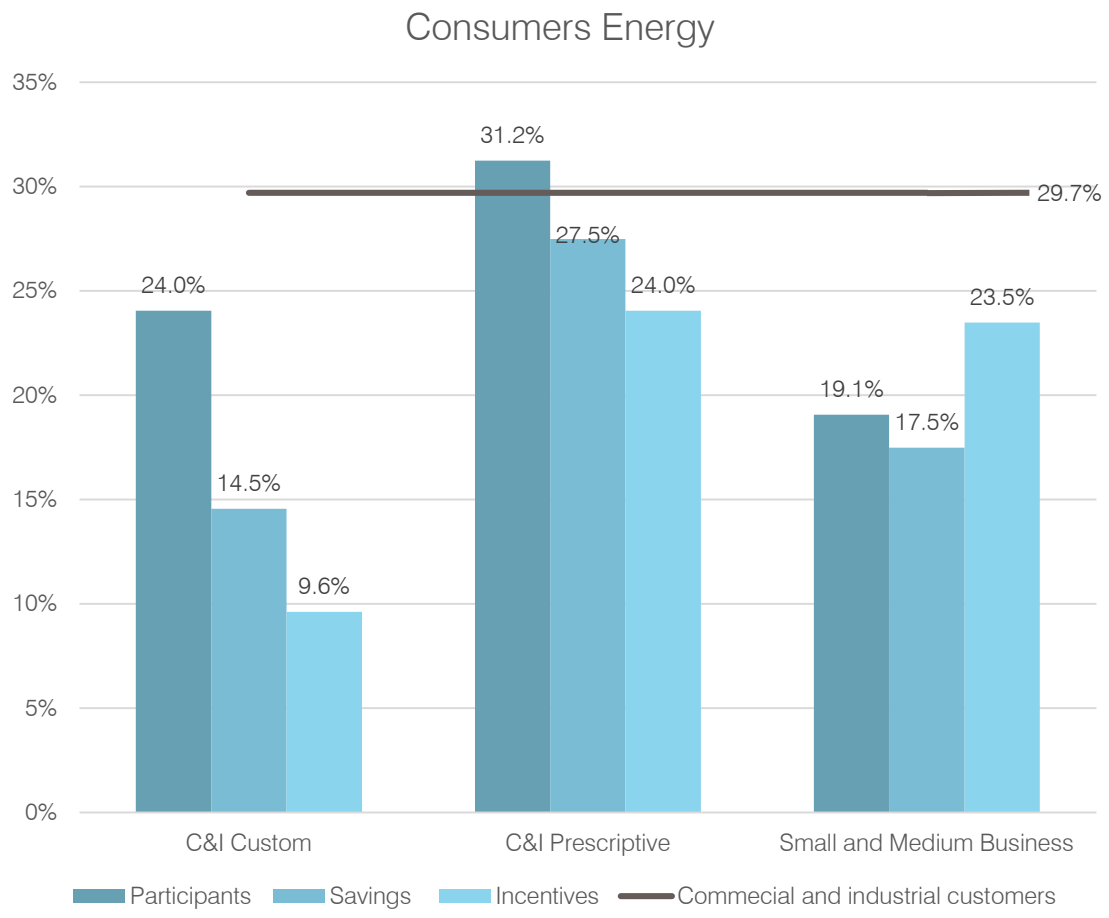


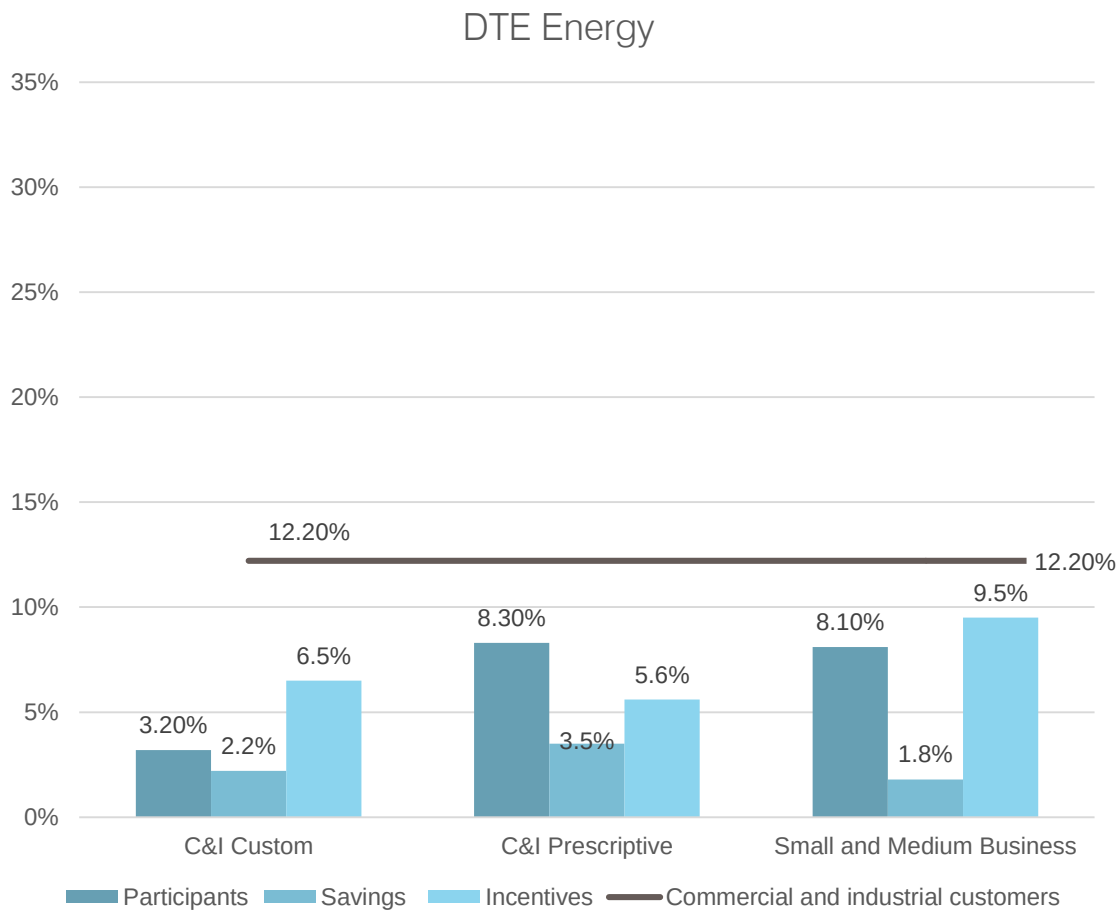
Residential Program Delivery





Commercial and Industrial Program Delivery





Utility Energy-efficiency Program Delivery in Rural Areas

- Stakeholder interviews indicate increased focus on agriculture and rural communities in program design and outreach
- Several programs show strong penetration in rural areas, but others show participation less than proportional to the number of rural customers
- Rural residents and businesses represent 55 percent of the customers impacted by elimination of energy-efficiency standards for cooperatives and municipalities
- Approximately 30 percent of rural customers overall will be impacted

Benchmarking and Best Practices

- Notable programs and policies:
  - Southern Minnesota Municipal Power Authority
  - Entergy Arkansas Agricultural Energy Solutions
  - Florida Office of Energy's Farm Energy and Water Efficiency Realization Program and Farm Renewable and Efficiency Demonstration
  - Winneshiek Energy District
  - Wisconsin Focus on Energy Rural Engagement and Statute § 196.374(5m)(b)
  - Minnesota Conservation Improvement Program
  - California Rural and Hard to Reach Working Group

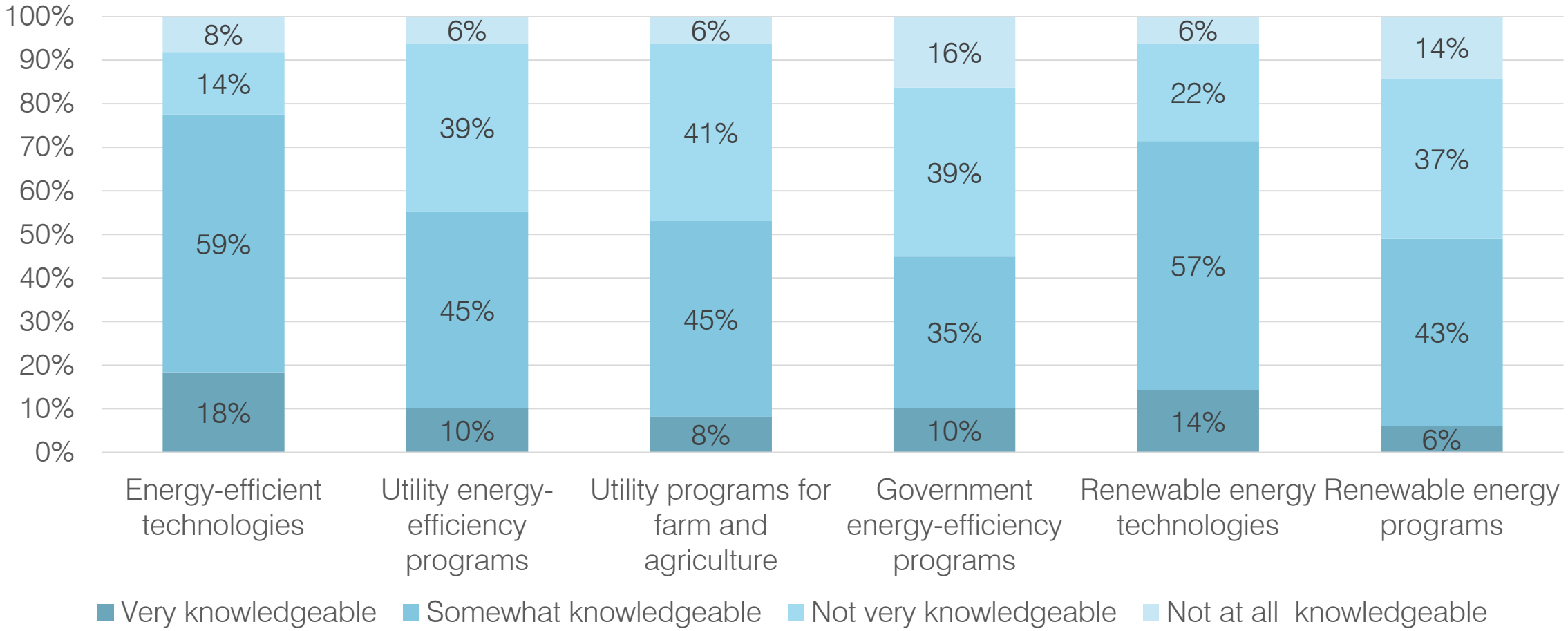
Opportunities for Enhancement

- A comprehensive suite of programs serving all rural customer segments (residential, C&I, and agricultural) is essential to provide wide participation options
- Leveraging federal financing (e.g., from the USDA) with state, ratepayer, and/or member dollars provides expanded resources for serving agriculture and rural customers
- State energy-efficiency requirements for municipal and cooperative utilities are important for reaching rural and agricultural customers
- Coordinated program administration supports improved energy-efficiency performance

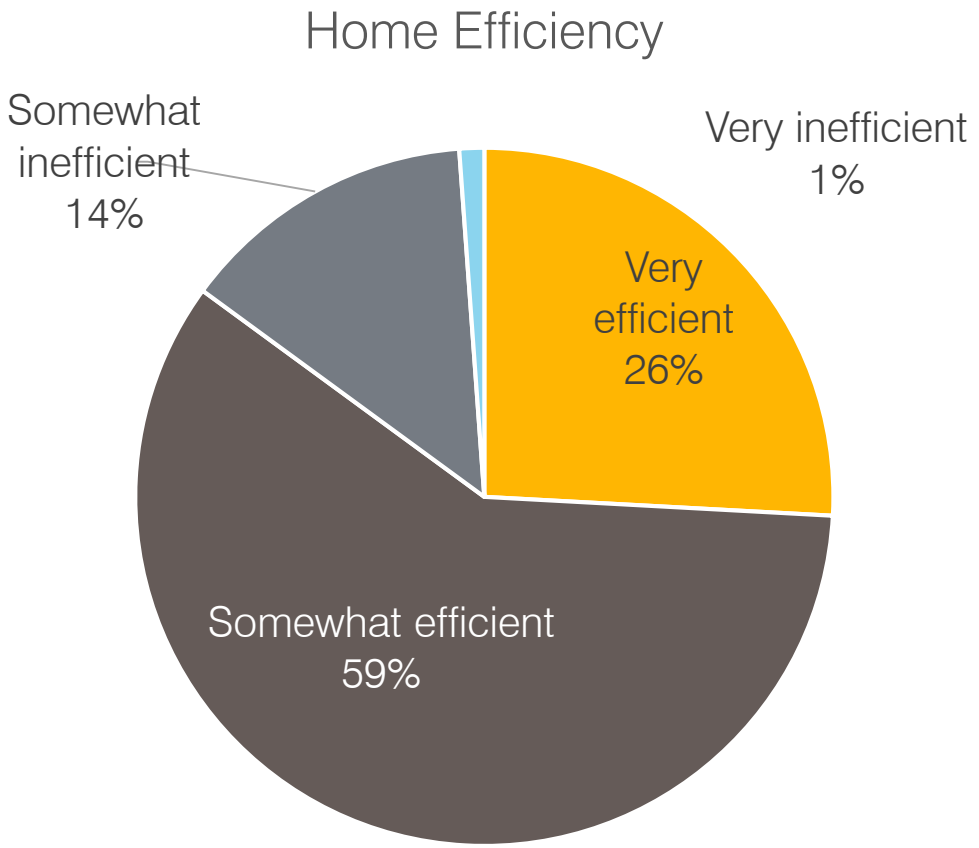
Survey Respondents

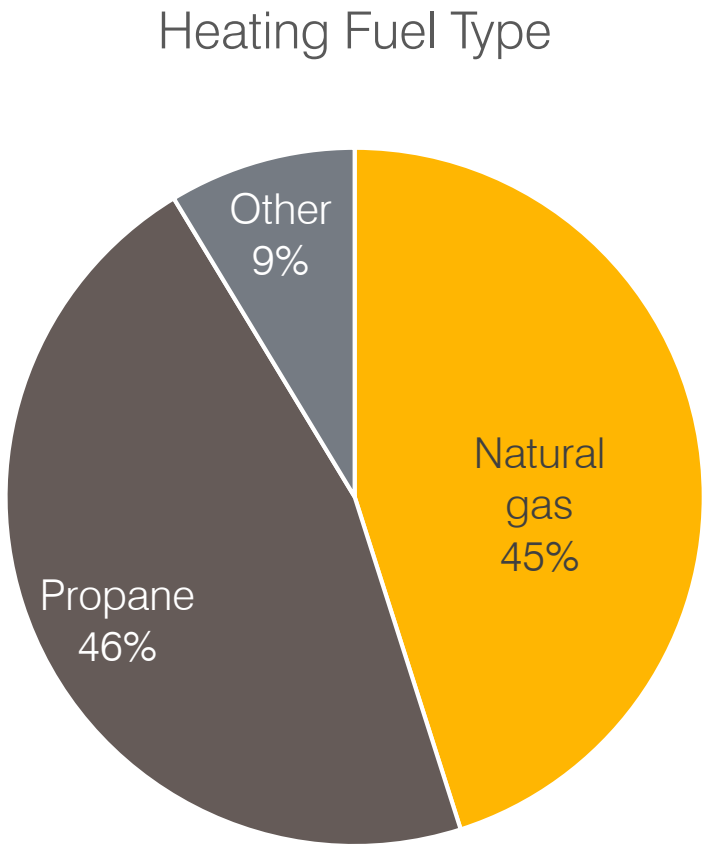
Respondent Type	Number of Responses
Resident of a rural community	175
Owner/operator of a farm	43
Owner/operator of an agribusiness	15
Owner/operator of a business in a rural community	15
Local government or community leader	38
Provider of services, equipment, or supplies to farms or rural facilities	10
Provider of energy-efficiency or renewable technologies or services	6

Overall Awareness of Technologies and Programs

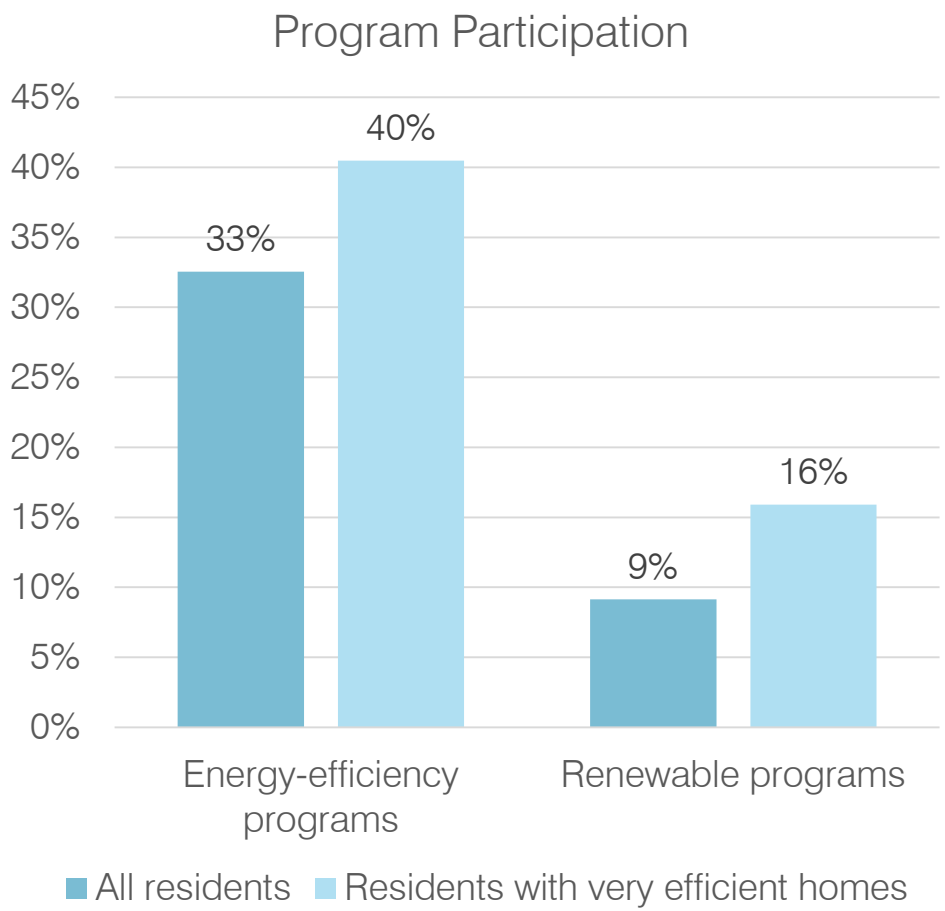


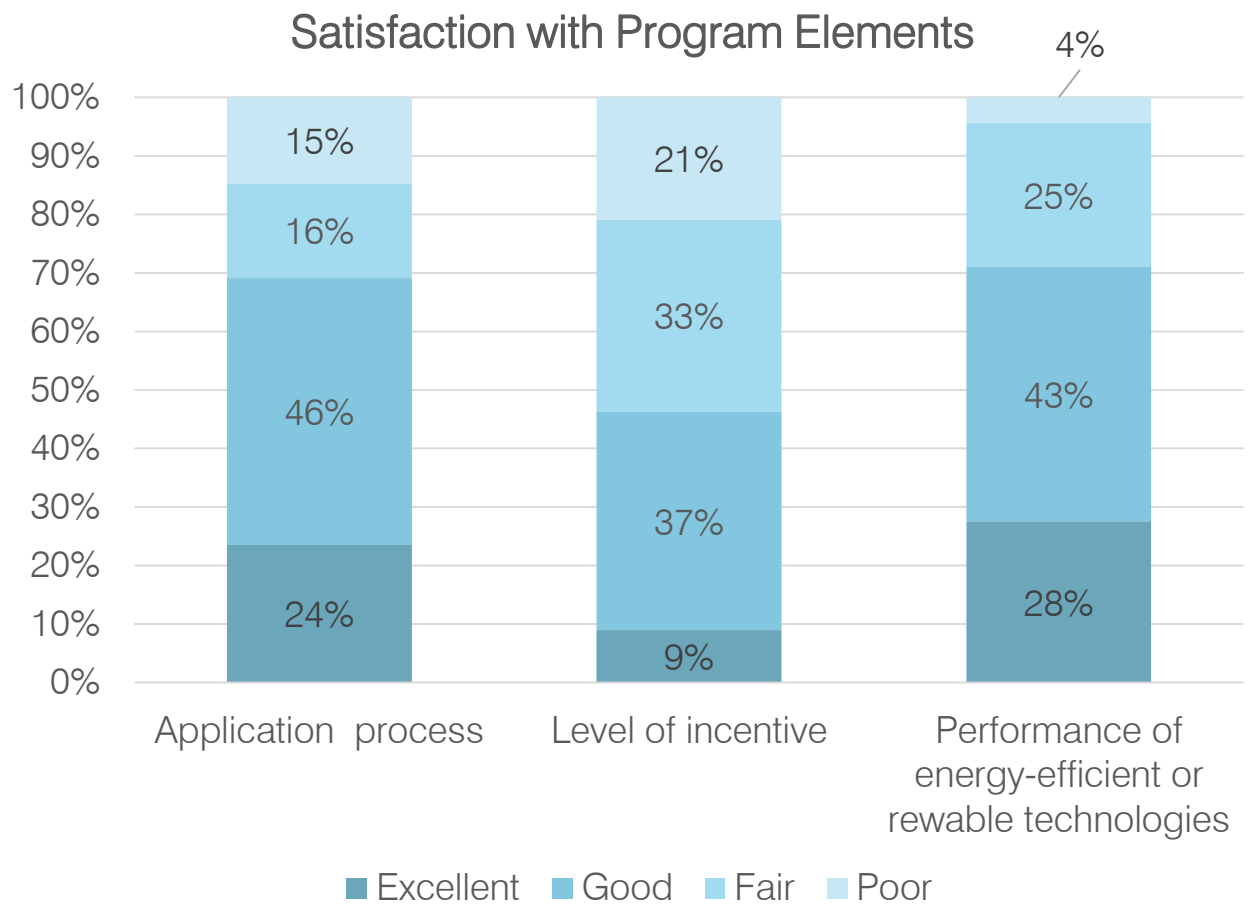
Residential Characteristics



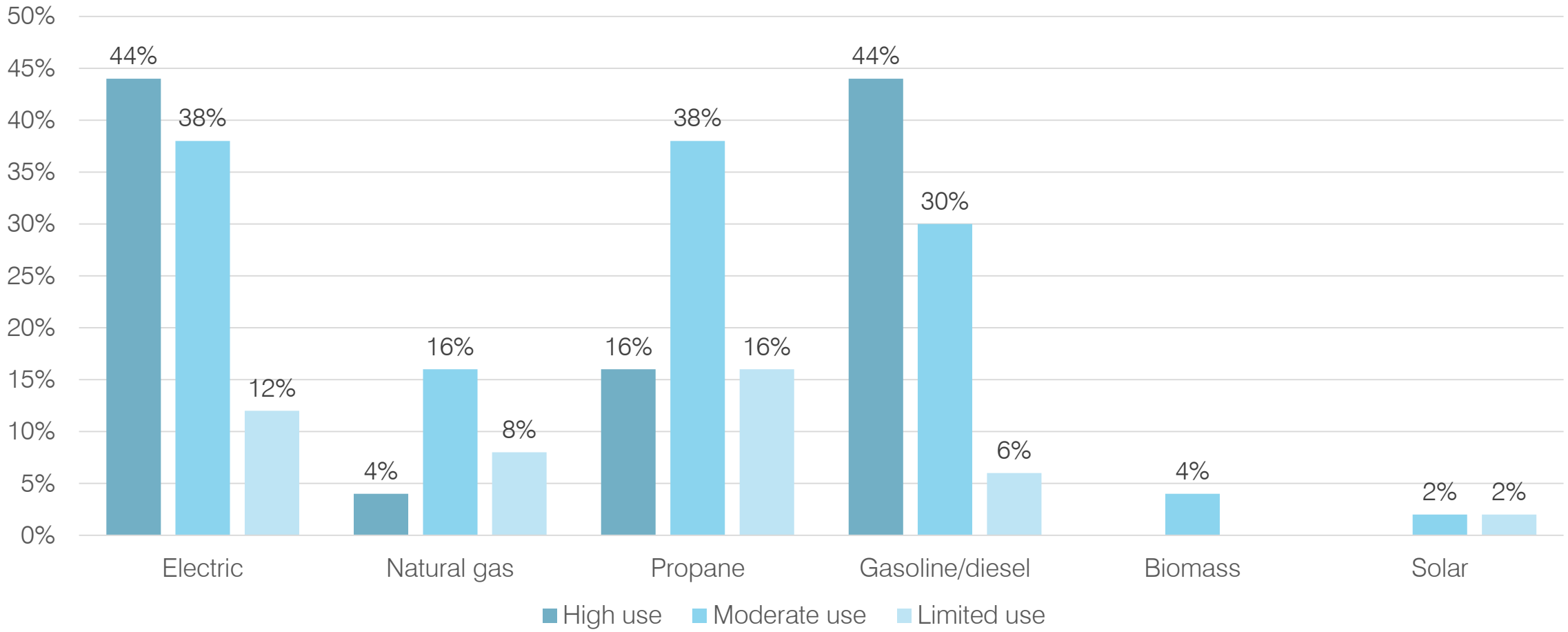


Residential Program Participation





Farm and Agribusiness Energy Use



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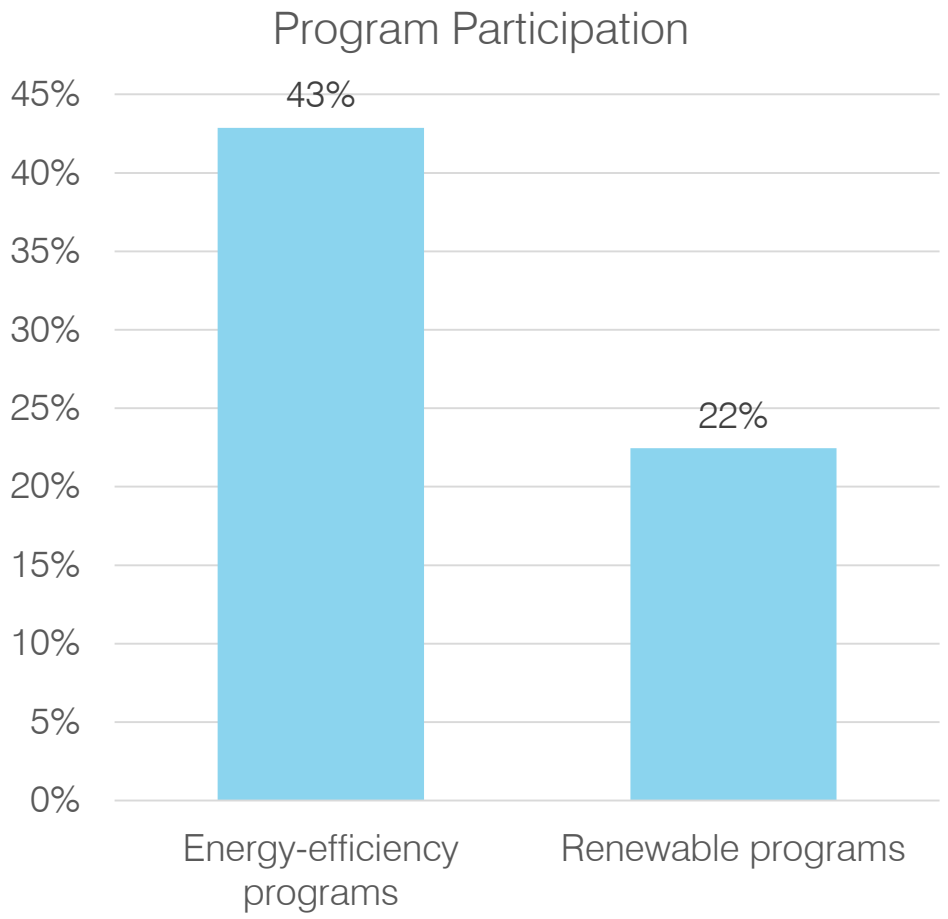
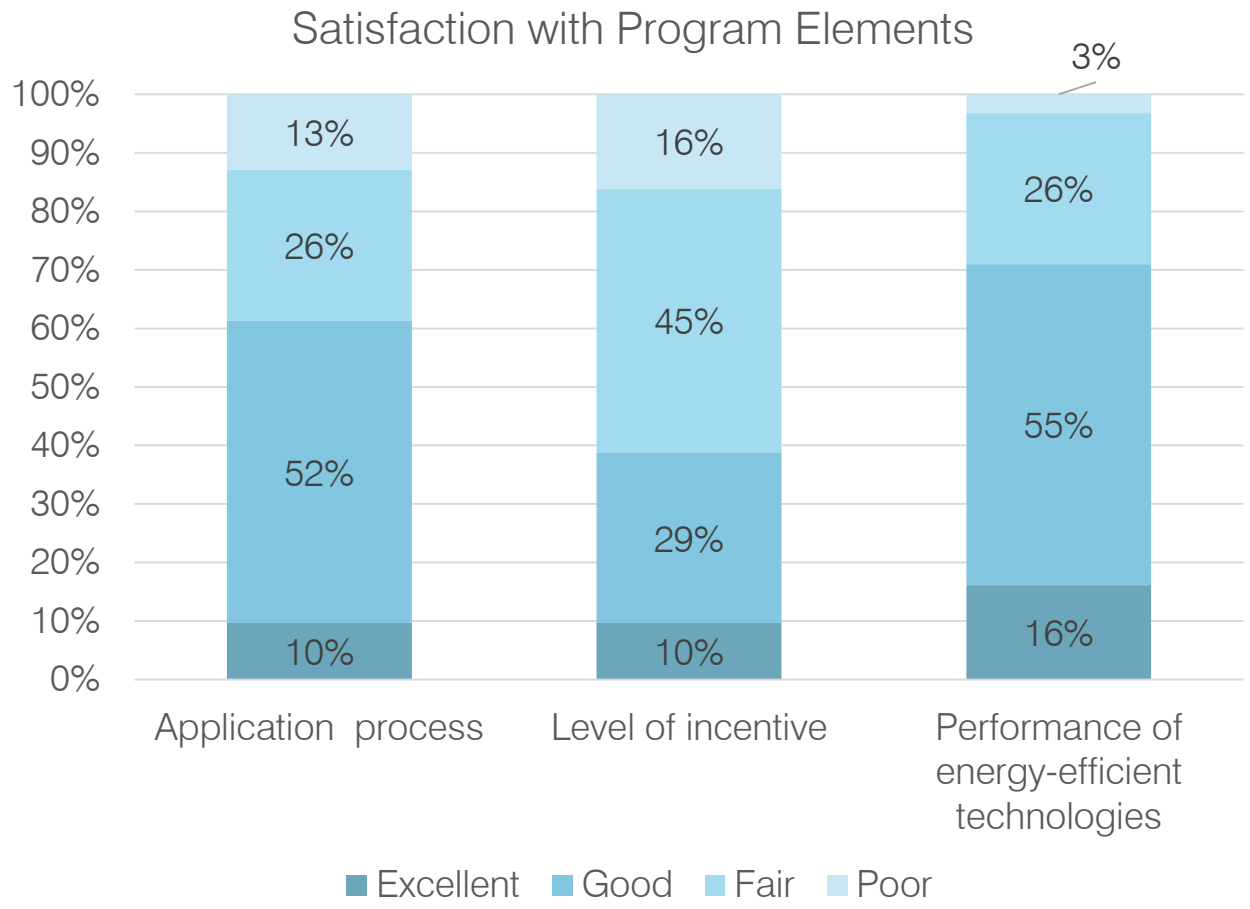
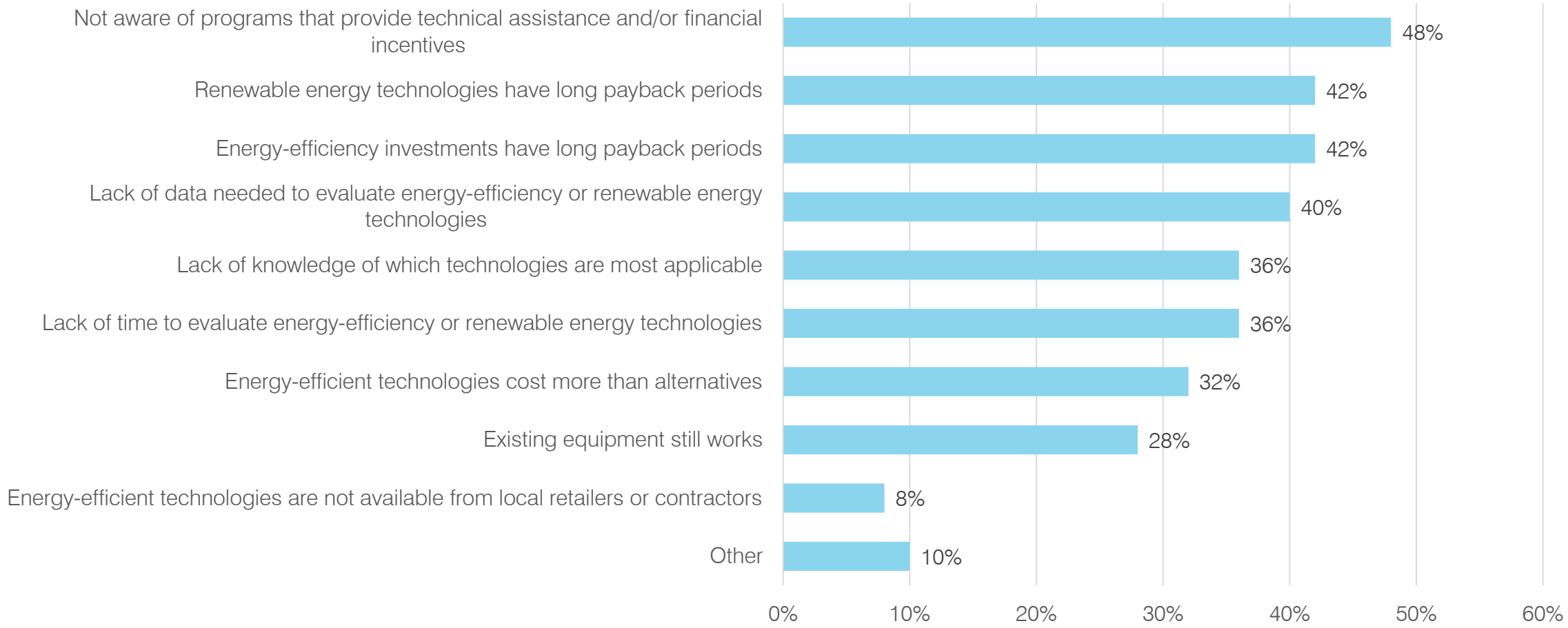
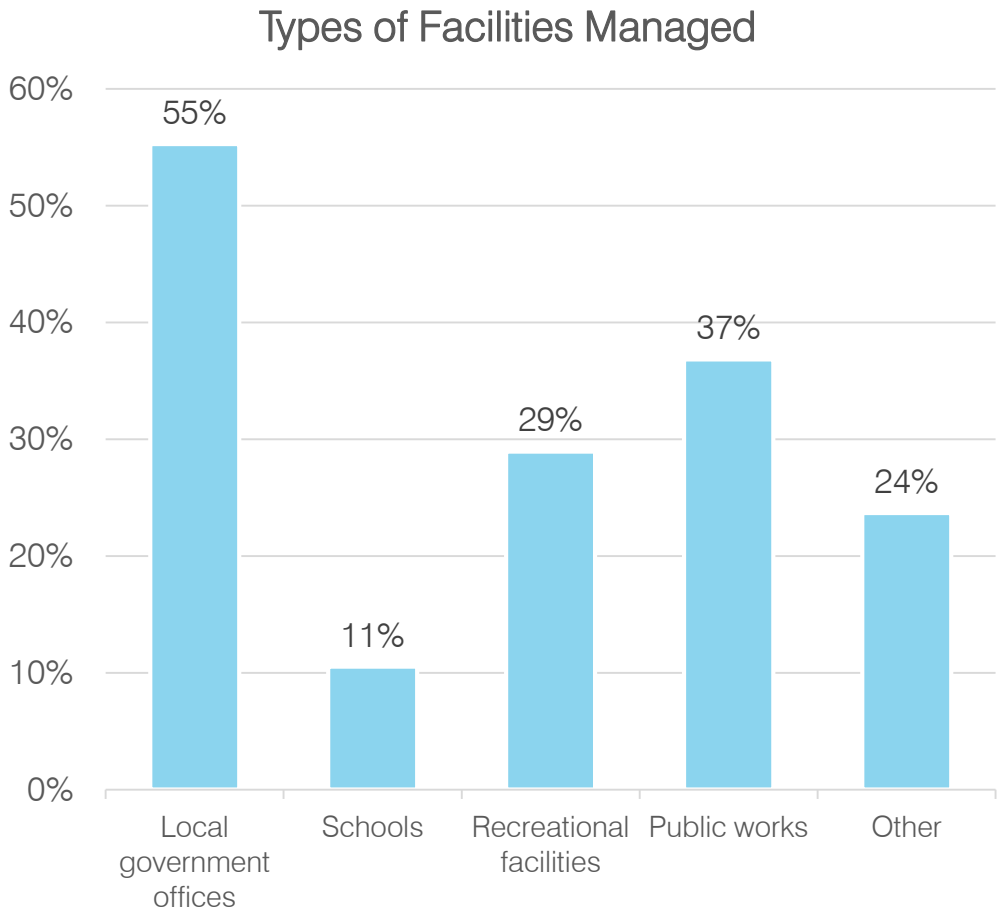


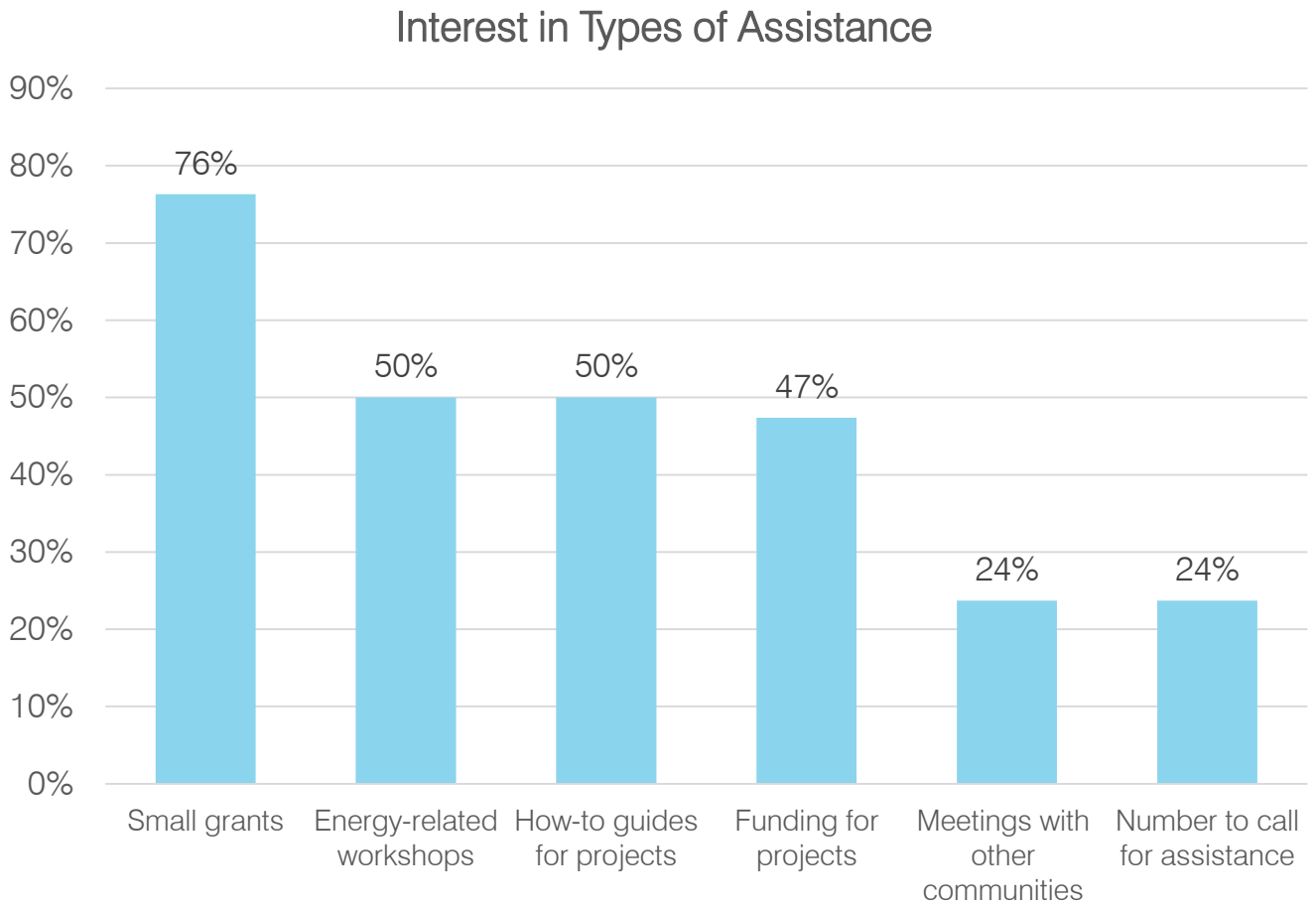


Farm and Agribusiness Barriers to Program Participation

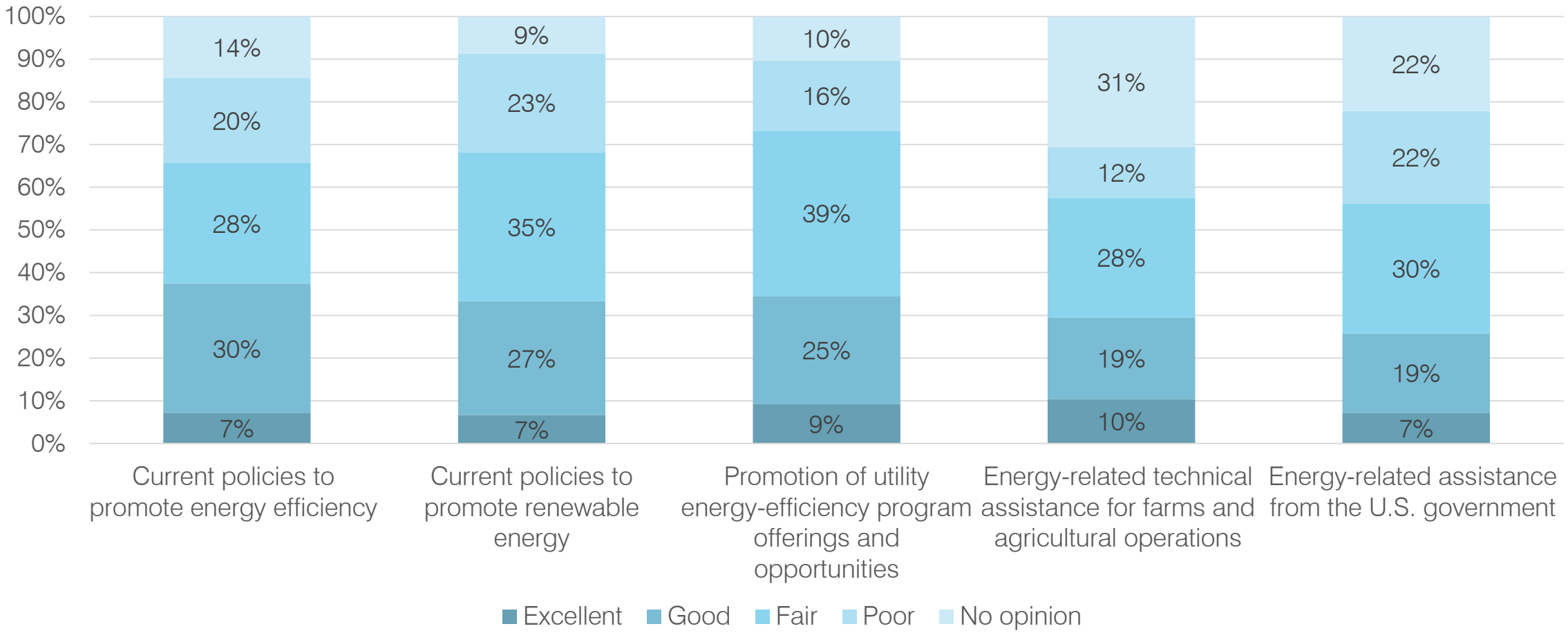


Local Government Leaders

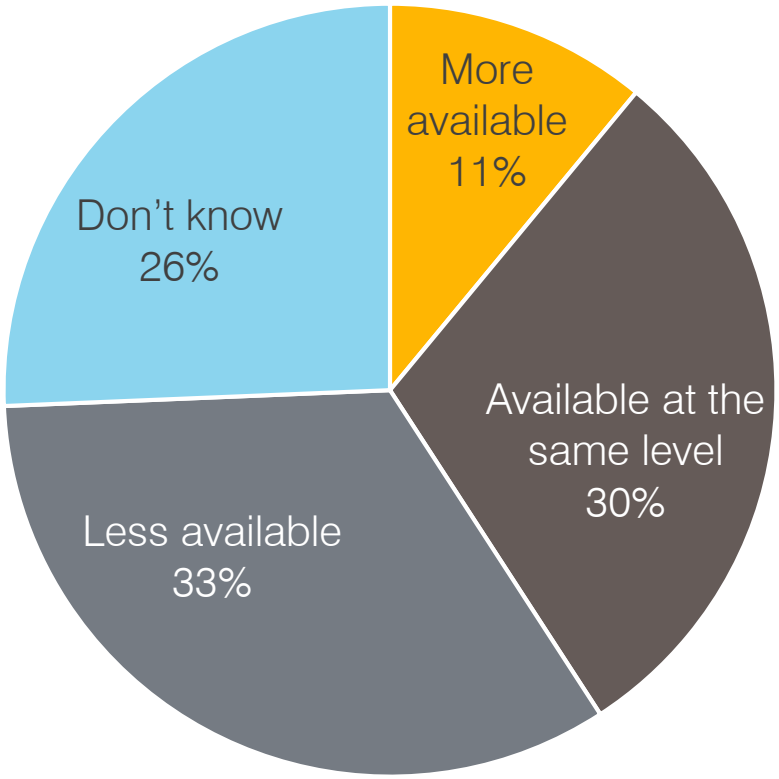




Perceptions of Current Policies and Programs



Availability of Programs



Barriers Identified

- Other priorities often take precedence over energy
- Program awareness remains low
- Deliverable fuels customers are left behind
- Costs and benefits must be clearly articulated
- Administrative burdens are deterrents
- Identifying and targeting agriculture customers is difficult
- Building and electric codes do not apply to agriculture customers

Further Barriers

- Farm energy audits represent an additional cost
- Farm energy audits do not reflect true costs
- Implementation from farm energy audits has been limited
- The Michigan Farm Energy Program faces critical challenges
- Energy efficiency in the agriculture sector requires a unique approach
- The future of energy-efficiency programming is uncertain
- Rural population demographics are unique
- Renewable energy and agriculture integration is challenged by existing programs
- Onsite renewable energy development has limits

Key Takeaways

- There is a significant amount of untapped, cost-effective energy-efficiency potential remaining
- Energy-efficiency programs should be available that have a specific emphasis on serving the needs of agriculture and rural customers
- Cost-effective energy-efficiency programming should continue to be a statewide policy priority and be made available to all Michigan residents
- Better communication of the potential benefits of energy efficiency to help customers feel confident in their decision to invest is key

Key Takeaways Continued

- As Michigan's renewable energy sector is primed for continued expansion, rural landowners need to have support to understand the impact of renewable energy siting on their business and how they can benefit
- Deliverable fuel customers should have the same opportunities to access energy-efficiency services as customers served by natural gas utilities
- Increasing customer awareness requires education and outreach about the viability of onsite renewable energy generation to control and/or reduce energy costs

Key Takeaways Continued

- Michigan's rural communities and agriculture sector need better collaboration and coordination to advance policies that reflect their needs and disseminate information about existing opportunities
- Farm energy audits need to be focused on demonstrating tangible benefits for customers in a way that drives implementation and supports customer action
- More needs to be done to directly link farm energy audits to utility energy-efficiency programs that can provide financial incentives and other assistance to help enable energy-efficiency improvements

Workshop Question:
What policies and programs are needed to increase energy improvements in agriculture and rural communities?

Break

Workshop Question:
What policies and programs are needed to increase energy improvements in agriculture and rural communities?

Thank you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